

an optically functional layer positioned on said support;
an attachment layer positioned on said optically functional layer; and
an analyte specific receptive layer positioned on said attachment layer,
wherein sample flow through said layers of said device is laminar flow.

2. (Amended) An optical assay device for the detection of an analyte of interest in a sample comprising:

a support containing channels;
an optically functional layer positioned on said support; and
an attachment layer positioned on said optically functional layer,
wherein sample flow through said layers of said device is laminar flow.

3. (Amended) An optical assay device for the detection of an analyte of interest in a sample comprising:

a porous support;
an optically functional layer comprising discrete, optically functional particles embedded in said support;
an attachment layer positioned on said particles; and
an analyte specific receptive layer positioned on said attachment layer,
wherein sample flow through said layers of said device is laminar flow.

4. (Amended) An optical assay device for the detection of an analyte of interest in a sample comprising:

a porous support;
an optically functional layer comprising discrete, optically functional particles embedded in said support; and
an attachment layer positioned on said particles,
wherein sample flow through said layers of said device is laminar flow.

5. (Amended) An optical assay device for the detection of an analyte of interest in a sample comprising:

a porous support;
an optically functional layer containing channels positioned on said support;
an attachment layer positioned on said optically functional layer; and
an analyte specific receptive layer positioned on said attachment layer,
wherein sample flow through said layers of said device is laminar flow.

6. (Amended) An optical assay device for the detection of an analyte of interest in a sample comprising:

a porous support;
an optically functional layer containing channels positioned on said support; and
an attachment layer positioned on said optically functional layer,
wherein sample flow through said layers of said device is laminar flow.

18. (Twice amended) Method for constructing an optical assay device with laminar flow properties, comprising the steps of:

providing a support;
providing an optically functional layer on said support;
providing an attachment layer on said optically functional layer; and
providing an analyte specific receptive layer on said optically functional layer, wherein said support and said layers are configured and arranged to provide laminar flow through or through and across said layers of said device.

19. (Twice amended) Method for constructing an optical assay device with laminar flow properties, comprising the steps of:

providing a support;
providing an optically functional layer on said support; and
providing an attachment layer on said optically functional layer, wherein said support and said layers are configured and arranged to provide laminar flow through or through and across said layers of said device.

23. (Amended)

A composition comprising a support and an optically functional layer
configured and arranged to provide laminar flow of sample through said optically functional
layer.

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